

Listing of Claims

This listing of claims will replace all prior listings of claims in the application:

a3

1. (Currently Amended) A silicon carbide~~An SiC formed~~ material produced by the CVD method using nitrogen gas together with raw material gases, characterized by possessing a specific gravity of 3.15 or more, light transmittance of 1.1 to 0.05%, and resistivity of 3×10^{-3} to 10^{-5} Ωm .

2. (Currently Amended) A method of producing a silicon carbide~~An SiC formed~~ material comprising producing an SiC film on the surface of a substrate by the CVD method using nitrogen gas together with raw material gases, and removing the substrate to obtain the SiC-formed material, wherein the raw material gas concentration, in terms of the ratio of the raw material flow rate (l/min) to the carrier gas flow rate (l/min) introduced into the CVD reaction chamber in which the substrate is located, is 5-15 vol%, the nitrogen gas concentration, in terms of the ratio of the nitrogen gas flow rate (l/min) to the raw material gas flow rate (l/min), is 10-120 vol%, the raw material gas retardation time defined by the following formula is controlled to 7-110 seconds, and the deposition rate is controlled to 20-400 $\mu\text{m}/\text{hour}$,

Raw material gas resident time (sec) =
{(Effective reaction volume in the reaction chamber (l))/(raw material gas flow rate (l/min))}x{(273+20)/(273 + Reaction temperature ($^{\circ}\text{C}$))}x60.

3. (New) A material as recited in Claim 1, wherein the material further comprises n-type semiconductor characteristics.

4. (New) A silicon carbide material obtained by producing a silicon carbide film on a substrate surface by CVD

using a nitrogen gas together with a raw material gas and a carrier gas, and removing the substrate to obtain the material formed from silicon carbide, wherein the raw material gas concentration, in terms of the ratio of the raw material flow rate (l/min) to the carrier gas flow rate (l/min) introduced into a CVD reaction chamber in which the substrate is located, is 5-15 vol%, and the nitrogen gas concentration, in terms of the ratio of the nitrogen gas flow rate (l/min) to raw material gas flow rate (l/min), is 10-120 vol%, the silicon carbide material comprising a specific gravity of 3.15 or more, light transmittance of 1.1 to 0.05%, and resistivity of 3×10^{-3} to 10^{-5} Ωm .

5. (New) A material as recited in Claim 4, wherein the carrier gas is either hydrogen gas or argon gas.

6. (New) A material as recited in Claim 4, wherein the carrier gas is a combination of hydrogen gas and argon gas.

7. (New) A material as recited in Claim 4, further comprising a means for controlling the substrate between 1100°C and 1500°C.

8. (New) A material as recited in Claim 4 whereby the raw material gas has a retardation time between 7 and 110 seconds.